Message

From: Rankins, Jonathan E CIV USARMY CEMVS (USA) [Jonathan.E.Rankins@usace.army.mil]
Sent: 3/2/2020 6:53:27 PM
To: Clements, Julie A CIV (USA) [Julie.A.Clements@usace.army.mil]; Hays, David C Jr CIV USARMY CENWK (USA) [David.C.Hays@usace.army.mil]; Walker, Stuart [Walker.Stuart@epa.gov]; Praskins, Wayne [Praskins.Wayne@epa.gov]
Subject: RESRADBLD runs, 4 walls (2m up from floor) and floor (approx. 10m2)
Attachments: HPNS Bldgs_Res Dose_1%_10%_20% RFs.xlsx; HPNS Bldgs_Res Risk_1%_10%_20% RFs.xlsx

The risk results are a bit surprising. Total residential risks (child + adult) increase very slightly (actually, negligibly) from 1% to 20% removable fractions (RF)...

RF = 1%: 3.94E-04

RF = 10%: 3.96E-04

RF= 20%: 3.97E-04

The detailed risk results are attached (including decay chain risks, since it was easier to summarize that way). Formulas are included.

There is definitely an upward trending of dose with increasing removable fraction. Below are the total residential doses (child + adult). As I did with the risk models, results from the child models are presented for year 0, while results from the adult models are presented for year 7.

RF = 1%: 52.8 mrem/yr

RF = 10%: 62.7 mrem/yr

RF= 20%: 73.8 mrem/yr